

2018 Kentucky Future Skills Report

Technical Notes

The Kentucky Future Skills Report (KFSR) is produced by the Kentucky Center for Statistics (KYSTATS) utilizing data from the Kentucky Longitudinal Data System (KLDS), the Kentucky Workforce Intelligence Branch, Labor Market Information Section (Kentucky LMI) and the Bureau of Labor Statistics (BLS). The latest update is December, 2018.

Occasionally, data from one source will not conform to data from another source because of differences in cohorts, how variables are defined, the treatment of missing data, and other factors. This means that data published in this report may not be comparable to data published in other reports. Some values are suppressed to preserve individual privacy.

Credential completion data in this report includes graduates from Kentucky's public high schools, in-state public and independent postsecondary institutions, and GED completers. Employment and wage outcome data includes only those firms covered by the Kentucky Unemployment Insurance (UI) System. Data on credential completions and employment outcomes were extracted from the KLDS. Projected employment demand is calculated using a combination of Kentucky LMI and BLS data.

This report is divided into three distinct sections on two dashboards: Historic Regional Supply, Current State Employment Outcomes, and Five Year Future Regional Demand. Statewide totals in Historic Regional Supply and Five Year Future Regional demand can be filtered by the ten Local Workforce Areas (LWAs) by clicking an area. Workforce Planning Region (WPR) totals can be seen when hovering over LWAs in the maps. See Appendix 1 for a list of WPRs and LWAs.

Dashboard 1: Supply & Employment Outcomes

This dashboard provides an overview of the KFSR by hovering over the information icon (denoted by a yellow "i" within a yellow circle) beside the title. Information icons are throughout the report, giving more details about each chart or section. Technical Notes can be accessed by clicking the KYSTATS logo, which define the terminology and methods of analysis in the report. Users can switch to the Future Demand dashboard by clicking the blue button below the title.

Kentucky Future Skills Report



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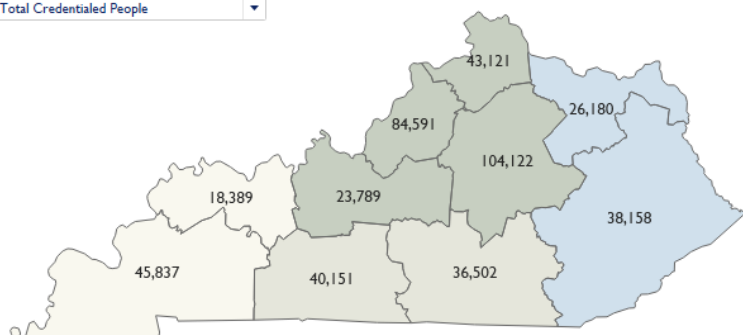
SUPPLY/EMPLOYMENT OUTCOMES

FUTURE DEMAND

Historic Regional Supply (2012-2016): Total Credentialed People

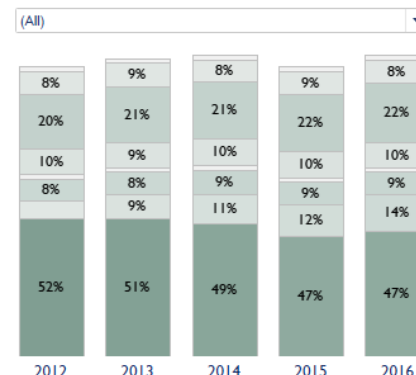
People or Credentials

Total Credentialed People 










Total Credentialed People Over Time

Focus



Distribution of Credentials Within Major Groups

							
Certificate	1%	28%	0%	40%	8%	28%	74%
Diploma	0%	2%		7%	1%	1%	8%
Associate	58%	7%	2%	19%	4%	7%	8%
Bachelor	35%	50%	39%	18%	58%	49%	8%
Master	5%	12%	57%	8%	22%	11%	2%
Doctoral	1%	0%	3%	7%	7%	3%	0%

This section provides a five year, historic overview of skilled people credentialed to enter the workforce in Kentucky. The historic workforce supply of credentials and people spans the 2011-12 through the 2015-16 Academic Years (AY). Supply is examined by both total credentials and also by people – which is indicated by the filter at the top of the page. The differentiation in counts by people and by credentials is detailed below.

Each chart can be filtered at the same time by choosing any combination of the following:

- Total credentialed people or total credentials
- Geographically by Local Workforce Area
- Major Group, which includes:
 - High school diploma or equivalent (only in Employment Outcomes)
 - High school diploma with career/technical (CTE) credentials (Only in Employment Outcomes)
 - Macro level categorization, based on Classification of Instructional Programs (CIP) codes for all post-secondary programs into 7 categories:
 - Arts and Humanities
 - Business



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- Education
- Health
- Social and Behavioral Sciences and Human Services
- STEM
- Trades – see Appendix 2 for more information about how specific academic majors are categorized)
- Focus (specific majors)
- Degree Level

Credential categories in historic workforce supply include: high school diploma or equivalent, high school graduate with CTE, postsecondary certificate, postsecondary diploma, associate degree, bachelor's degree, master's degree, and doctorate or professional degree. Individuals who received GEDs are included in the high school diploma or equivalent credential category.

1. Detail Level:

- a. **Total Credentialed People:** This option shows the total number of people who earned credentials within each area and region. People receiving more than one credential are only counted once in each geographic region (LWA, WPR, and county), and are only counted once in each credential category. The difference in the state-level aggregates, LWA aggregates, and WPR aggregates results from certain credentials being attributable to the Commonwealth as a whole, but not to a specific county. People receiving credentials in multiple years are counted once in each year they received any number of credentials.
- b. **Total Credentials:** This option shows the total number of credentials issued within each area and region. People receiving more than one credential are counted multiple times – each credential is counted in each geographic region and also each credential category.

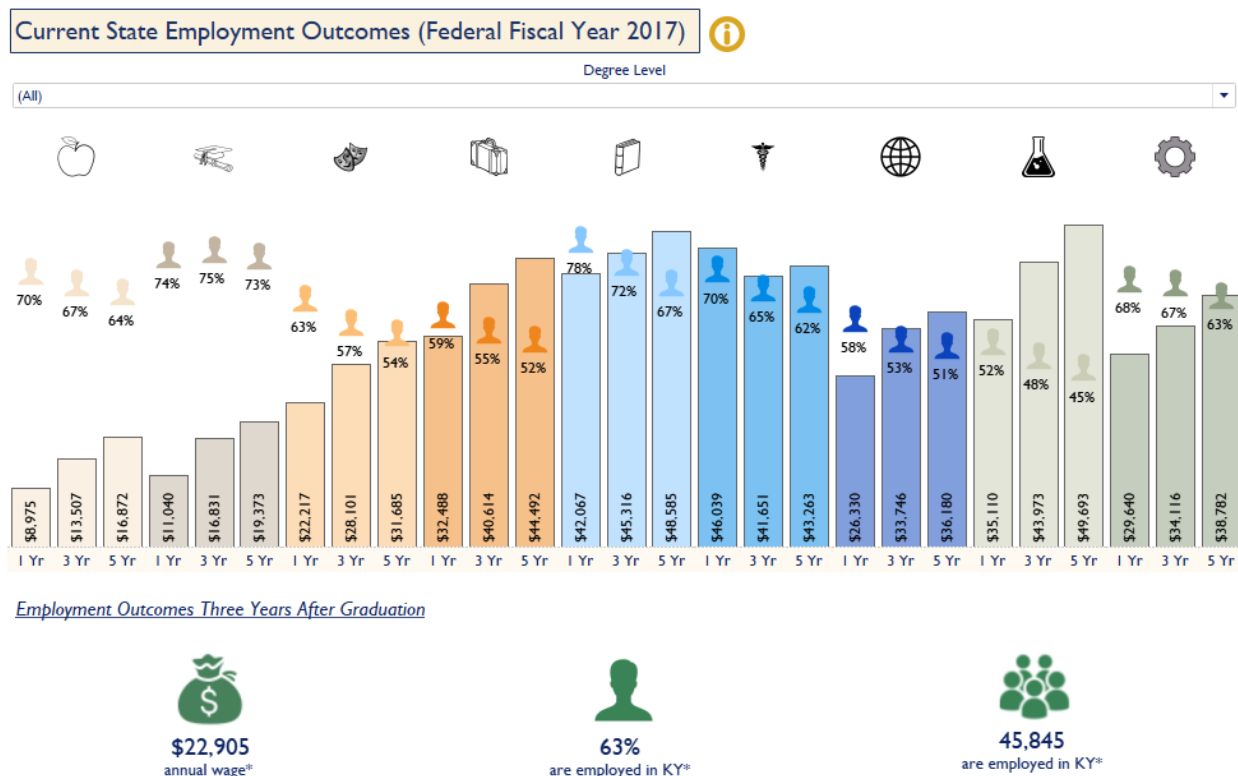
Walkthrough

The Local Workforce Area (LWA) map shows the distinct number of people earning a credential or the total number of credentials earned (depending on the filter value) at an institution within that area. Clicking an LWA will filter the dashboard to metrics specific to the selected LWA. Hovering over an LWA will give its associated Workforce Planning Region (WPR) totals.

The stacked bar chart shows the distribution of credential levels over time between 2012 and 2016. These levels range from high school diploma or equivalent to doctorate credentials. You can filter these by specific majors with the filter below the title. Clicking a major icon below will make this filter only show specific majors within the selected major group. Hovering over any part of the stacked bar will show the credentials earned at that level and in that year.

The table below the map shows the level of credentials within each major group. You can also get a list of the specific majors within each level and major group by hovering.

Current Employment Outcomes



This section provides an overview of employment outcomes, including percent employed, key sector of employment, and median wage in Federal Fiscal Year 2017 (October 1, 2016 through September 30, 2017) (FFY 2017) for people earning credentials in Academic Years (AY) 2015-16 (1Yr), 2013-14 (3Yr) and 2011-12 (5Yr).

Individuals were considered to be employed in Kentucky if they earned wages at a firm covered by the Kentucky Unemployment Insurance (UI) System during any quarter of FFY 2017 and were not reenrolled at a Kentucky public or independent postsecondary institution in AY 2016-17. The UI System does not include most of the self-employed, most federal employees, the military, or several other small categories of employment. Individuals who reenrolled in postsecondary during AY 2017 are not included in any views of this dashboard. Wages are calculated as the median of the sum of all four fiscal quarters for each individual in the dataset. No annualization or proration of wages was performed.

Employment outcomes are presented for each individual's highest degree earned. If an individual received multiple credentials of the same level (e.g. two Master's degrees) in different years, the most recent degree is used. If they received multiple degrees of the same level in their most recent credential-receiving year, all such degrees are included once for each major category. In the numeric table and pie charts, the person will be counted only once in any given disaggregated/filtered view. As a result, any given disaggregate or aggregate filter combination

of the table is accurate, but the disaggregates will not sum to the similarly aggregate totals when unfiltered.

Key sectors of employment were assigned by using the sector in which each completer earned their highest wage during their highest earning quarter in FFY 2017. The chart on key sectors (hovering over the wage bars or employment percentages) of employment are created using groupings of the 2-digit North American Industry Classification System (NAICS) codes - the federal standard in classifying business establishments.

Walkthrough

The degree legend ranges from high school equivalent to doctoral level credentials. Changing the degree level filter will show employment outcomes below at that credential level across the state.

The bar chart shows 1 to 5 year wages (relative to FFY 2017) as well as the employment percentage over time represented by the 'face' icon. Hovering over the bars will show the distribution of sectors of employment for that major and can also be filtered with the major icons below as well as the degree legend.

The three icons below the bar chart show 3 year employment outcomes at a glance. The first shows median annual wages, the second shows the percent employed in Kentucky, and the third shows counts of people employed in Kentucky. These can be filtered by changing the degree level filter as well as clicking the major group icons above.

Dashboard 2: Future Regional Demand (2018-22)

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SUPPLY/EMPLOYMENT OUTCOMES

FUTURE DEMAND

Five Year Future Regional Demand (2018 - 2022)



Occupation Group

(All)

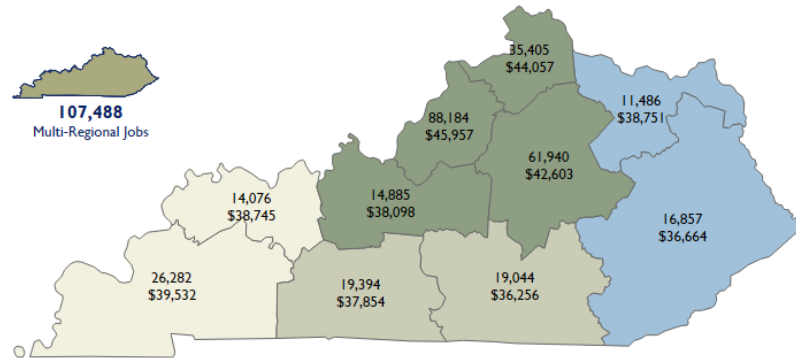
Specific Occupations

(All)

Educational Skill

(All)

Five Year Projected Demand and Wages by Local Workforce Area



Five Year Projected Outcomes by Occupation



Educational Skill

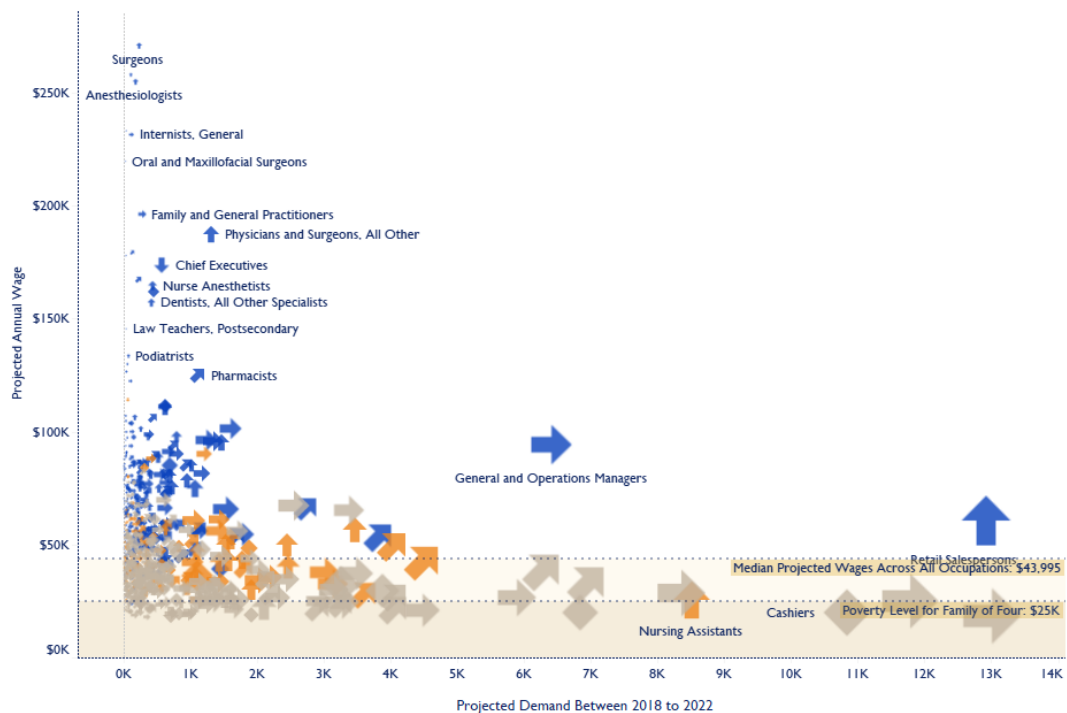
- Low Skill
- Middle Skill
- High Skill

Occupational Growth

- Declining
- Stable
- Growing
- Fast Growing
- Very Fast Growing

415,041
Projected Job
Openings

\$43,995
Projected Annual
Wage



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This dashboard provides an overview of projected 5 year employment demand in Kentucky for the years 2018-2022. Baseline data were taken from:

The Kentucky LMI Occupation Outlook, 2014-2024

<https://kystats.ky.gov/KYLMI/Index/>

Current Kentucky LMI State Level Projections are redacted for occupations with reported estimated employment below 50. Future Kentucky LMI Projections will be redacted for occupations with reported estimates below 10.

The BLS Occupational Projections, 2014-2024, Table 1.2

https://www.bls.gov/emp/ep_table_102.htm

The BLS Occupational Employment Statistics (OES) wage data, May, 2016 (Kentucky and National) is used for imputation when wage data is missing or redacted.

<https://www.bls.gov/oes/tables.htm>

The BLS Industry Occupation Matrix Data, 2014 is used to calculate industry breakdown of employment for each SOC.

<https://www.bls.gov/emp/ind-occ-matrix/matrix.xlsx>

General Occupation and Specific Occupation:

General Occupations are assigned according to 2-digit Standard Occupational Classification (SOC) codes. Specific Occupations are assigned according to full 6-digit SOC codes.

Current Estimated Employment Calculation:

Redaction Handling:

This report conforms to redacted SOC codes in the Kentucky LMI 2014-2024 as mandated by Kentucky and BLS/OES.

This report uses the current Kentucky LMI numeric redaction cutoff of 10.

State and LWA employment numbers are taken from Kentucky LMI 2014-2024 Occupational Outlook. All national employment and wage statistics are taken from BLS.

Because this report includes employment calculations at the LWA level and state level, there are a few different procedures depending on the level of redaction for a specific SOC, and on whether redaction occurs at the 3-digit or 6-digit SOC level.

See Appendix 3 for a list of redacted SOC codes.

3-digit SOC, LWA level

In cases where Current Estimated Employment is redacted or missing from the Kentucky LMI 2014-2024 Occupational Outlook **at the LWA level** for **3-digit SOCs**, Current Estimated Employment is imputed using the following method:

The ratio for the 3-digit SOC's vs. the 2-digit SOC's employment is taken at the state level. This value is multiplied by the 2-digit SOC's employment at the LWA level to solve for the 3-digit SOC's employment at the LWA level:

$$\begin{aligned} & (LWA\ 3 - digit\ current\ final\ employment\ estimation, 2014) \\ = & \frac{(LWA\ 2 - digit\ estimated\ employment) * (State\ 3 - digit\ estimated\ employment)}{State\ 2 - digit\ estimated\ employment} \end{aligned}$$

6-digit SOC, State level

In cases where Current Estimated Employment is redacted or missing from the Kentucky LMI 2014-2024 Occupational Outlook **at the state level** for **6-digit SOCs**, Current Estimated Employment is imputed using the following method:

The ratio for the 6-digit SOC's vs. the 3-digit SOC's employment is taken at the national level. This value is multiplied by the 3-digit SOC's employment at the state level to solve for the 6-digit SOC's employment at the state level.

$$\begin{aligned} & (State\ 6 - digit\ current\ final\ employment\ estimation, 2014) \\ = & \frac{(State\ 3 - digit\ estimated\ employment) * (National\ 6 - digit\ estimated\ employment)}{National\ 3 - digit\ estimated\ employment} \end{aligned}$$

6-digit SOC, LWA level

Most commonly, Current Estimated Employment is redacted or missing from the Kentucky LMI 2014-2024 Occupational Outlook **at the LWA level** for **6-digit SOCs**. In this case, Current Estimated Employment is imputed using the following method:

The ratio for the 6-digit SOC's vs. the 3-digit SOC's employment is taken at the state level. This value is multiplied by the 3-digit SOC's employment at the LWA level to solve for the 6-digit SOC's employment at the LWA level.

$$\begin{aligned} & (LWA\ 6 - digit\ current\ final\ employment\ estimation, 2014) \\ = & \frac{(LWA\ 3 - digit\ estimated\ employment) * (State\ 6 - digit\ estimated\ employment)}{State\ 3 - digit\ estimated\ employment} \end{aligned}$$

When solving for the redacted LWA level 6-digit SOC's employment, it is possible that the 6-digit SOC's employment is redacted at the state level, or that the 3-digit SOC's employment is redacted at the LWA level. In these cases, the imputed values given by the above procedures are substituted and used to impute the 6-digit SOC's employment at the LWA level.

The process above is repeated for redacted/missing data from the Kentucky LMI 2014-2024 Occupational Outlook, Estimated Growth (without exception, SOC's with redacted Current Estimated Employment have redacted Estimated Growth). In this case, the National Estimated Growth percentage from BLS, Occupational Projections 2014-2024 is used unchanged at the Specific Occupation level in the calculations below.

Using the Kentucky LMI or BLS, 2014-2024 Estimated Growth Percentage detailed above, depending on redaction and confidentiality of the Estimated Projected Employment/Estimated Growth numbers for 2014, an annual compound growth percentage is calculated using:

$$(\text{Compound Growth Percentage}) = (1 + 10 \text{ Year Estimated Growth Percentage})^{\frac{1}{10}} - 1$$

One year of compound growth were then calculated using this Compound Growth Percentage to represent growth from 2014 through 2015 and added to the Current Estimated Employment 2014 (either from Kentucky LMI or imputed as above), giving a final, Current Estimated Employment through 2015:

$$\begin{aligned} & \text{Current Estimated Employment, 2015} \\ &= \text{Final Current Estimated Employment, 2014} * (1 + \text{Compound Growth Percentage})^1 \end{aligned}$$

Total Demand Calculation:

In cases where Current Estimated 10 Year Demand is redacted or missing from the Kentucky LMI 2014-2024 Occupational Outlook, Estimated Demand is imputed using a similar method to Current Estimated Employment:

3-digit SOC, LWA level

$$\begin{aligned} & (\text{LWA 3 – digit estimated demand}) \\ &= \frac{(\text{LWA 2 – digit estimated demand}) * (\text{State 3 – digit estimated demand})}{\text{State 2 – digit estimated demand}} \end{aligned}$$

6-digit SOC, State level

$$\begin{aligned} & (\text{State 6 – digit demand}) \\ &= \frac{(\text{State 3 – digit estimated demand}) * (\text{National 6 – digit estimated demand})}{\text{National 3 – digit estimated demand}} \end{aligned}$$

6-digit SOC, LWA level

(LWA 6 – digit estimated demand)

$$= \frac{(LWA\ 3 - \text{digit estimated demand}) * (\text{State 6} - \text{digit estimated demand})}{\text{State 3} - \text{digit estimated demand}}$$

Using either the above imputed demand, or the unredacted/non-confidential Kentucky LMI Projected Demand as appropriate, the overall 10 year demand percentage was calculated versus the appropriate (as calculated above) Current Estimated Employment, 2014 (i.e., before the 1 years of calculated growth were applied) by:

$$\text{Total Demand Percentage} = \frac{\text{Estimated 6 – digit demand}}{\text{Final Current Estimated Employment 2014}}$$

This was then used to calculate a compound annual growth percentage by:

$$\text{Compound Demand Percentage} = (1 + \text{Total Demand Percentage})^{\frac{1}{10}} - 1$$

Finally, 5 years of this compound demand was calculated using the Final Current Estimated Employment, 2015 calculated above to calculate a Final 5 Year Projected Demand for each SOC:

Final 5 Year Projected Demand

$$= \text{Final Current Estimated Employment, 2015} * (1 + \text{Compound Demand Percentage})^1$$

Occupation Growth Adjective Definitions:

Occupation growth adjectives are based on Kentucky LMI's cut points from the 2014-2024 Occupational Outlook Projections. Since 10 year growth is included in the underlying computations, the following growth adjectives are assigned to each SOC, without proration or conversion to a 5 year metric.

Adjective	Kentucky LMI 2014-2024 Cut Points
Declining	< 0%
Stable	0% - 6.99%
Growing	7.0% - 12.99%
Fast Growing	13.0% - 17.99%

High, Medium and Low Skill Occupation Definitions:

Occupational skill levels (only visible when viewing the dashboard at the Specific Occupation detail level) are based on the BLS Education and Training Assignments by Detailed Occupation, 2014 (https://www.bls.gov/emp/ep_table_112.htm).

The Kentucky Office of Career and Technical Education (CTE), along with KYSTATS analysts, further cross-walked these assignments into three buckets:

BLS Entry Level Education Level	Skill Level
Bachelor's Degree and Higher	High Skill
Postsecondary Below Bachelor's	Middle Skill
High School Diploma or Below	Low Skill

Occupations that require a high school diploma, but also require substantive Career/Technical training at the secondary level were moved to “Middle Skill” on recommendation of CTE as noted below:

SOC Code	Title	Education Needed for Entry Level Position	Skill Level
11-3071	Transportation, Storage, and Distribution Managers	High school diploma or equivalent	Middle
43-1011	First-Line Supervisors of Office and Administrative Support Workers	High school diploma or equivalent	Middle
47-1011	Supervisors of Construction and Extraction Workers	High school diploma or equivalent	Middle
47-2021	Brickmasons and Blockmasons	High school diploma or equivalent	Middle
47-2031	Carpenters	High school diploma or equivalent	Middle
47-2111	Electricians	High school diploma or equivalent	Middle
47-2152	Plumbers, Pipefitters, and Steamfitters	High school diploma or equivalent	Middle
47-2211	Sheet Metal Workers	High school diploma or equivalent	Middle
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	High school diploma or equivalent	Middle
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	High school diploma or equivalent	Middle
49-9041	Industrial Machinery Mechanics	High school diploma or equivalent	Middle
49-9071	Maintenance and Repair Workers, General	High school diploma or equivalent	Middle
51-1011	First-Line Supervisors of Production and Operating Workers	High school diploma or equivalent	Middle
51-4041	Machinists	High school diploma or equivalent	Middle
51-4121	Welders, Cutters, Solderers, and Brazers	High school diploma or equivalent	Middle
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	High school diploma or equivalent	Middle
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	High school diploma or equivalent	Middle
53-3021	Bus Drivers, Transit and Intercity	High school diploma or equivalent	Middle
53-3022	Bus Drivers, School or Special Client	High school diploma or equivalent	Middle
53-3033	Light Truck or Delivery Services Drivers	High school diploma or equivalent	Middle

Wage Calculations:

General Occupation:

Average wages for General Occupations are calculated as a weighted mean of the underlying Specific Occupations, using Current Estimated Employment as the weighting variable. LWA level wage data are taken from Kentucky LMI 2014-2024 Occupational Outlook; state level wage data are taken from either Kentucky LMI or BLS; national level wage data are taken from BLS. No wage will be reported when demand is zero.

Specific Occupations:

For Specific Occupations whose wages **are not** redacted/missing in the Kentucky LMI 2014-2024 Occupational Outlook, mean wages are given as the Annual Mean Wage.

For Specific Occupations whose wages **are** redacted/missing in the Kentucky LMI 2014-2024 Occupational Outlook **at the state level**, values are imputed using the following procedure. If BLS publishes Kentucky wages for SOC's that are redacted by Kentucky LMI, the BLS wage value is substituted. If both BLS and Kentucky LMI redact state level wages for a SOC, the following calculation is performed (using Kentucky LMI 2014-2024 and BLS Occupational Employment Statistics, National 2016 values), and the annual wage imputed:

$$\text{State 6 – digit annual wage} = \frac{(\text{State 2–digit annual wage}) * (\text{National 6–digit annual wage})}{\text{National 2–digit annual wage}}$$

For Specific Occupations whose wages are redacted/missing in the Kentucky LMI 2014-2024 Occupational Outlook **at the LWA level**, values are imputed using the following procedure:

$$\text{LWA 6 – digit annual wage} = \frac{(\text{LWA 2–digit SOC annual wage}) * (\text{State 6–digit annual wage})}{\text{State 2–digit annual wage}}$$

When solving for redacted LWA level 6-digit wages, it is possible that the State level 6-digit wage is also redacted. In this case, the State level 6-digit imputed wage value is used to impute the LWA level 6-digit wage.

See Appendix 4 for a list of redacted SOC wages.

Industry Mix of Employment

In order to show the industry breakdown of employment for each specific occupation, statistics were taken from BLS industry occupation matrix. This file shows what percent of each SOC is employed in an industry, at the national two-digit North American Industry Classification System (NAICS) level. These percentages are multiplied by final employment and demand numbers at the state and LWA levels, yielding an estimate for the industry distribution of employees for each SOC.

Due to redaction in the underlying BLS file, some SOC's employment and demand cannot be assigned to an industry. In these cases, the employment and demand that can be assigned to an industry is subtracted from the totals for each SOC, and the remaining employment/demand is labeled as having no assignable industry.

Walkthrough

The Local Workforce Area (LWA) map shows the total number of projected jobs within that area. Clicking an LWA will filter the dashboard to metrics specific to the selected LWA. Hovering will give a list of the top 10 jobs in that region by projected demand.

The two icons below the map show the total number of projected jobs across the state and the average wages for those jobs.

The arrow chart plots average wages by total number of projected jobs for all general and specific occupations. For more information about how to read this chart, see the info icon beside it. Clicking a specific occupation arrow will filter the map above. Hovering over an occupation will show the top Knowledge, Skills, and Abilities (KSAs) associated with that occupation. KSA information is from O*NET. The size of the arrow will increase as the number of estimated currently employed Kentuckians within that occupation increases. The arrows will also point in a certain direction depending on the growth of the occupation. When set on specific occupation, educational skill can be noted on the arrows with beige indicating low skill (high school or equivalent), orange being mid-skill (career and technical education, postsecondary certificates or diplomas, or associate degree), and blue representing high skill (bachelor degrees or higher). Please see the legends on the right of the chart for more information.

Data on Knowledge, Skills, Abilities, and Work Activities (KSAW) are from O*NET and are ranked by their standardized order of importance (This is a score between 0 and 100 and can be found at www.onetonline.org/help/online/scales). Hovering over an arrow of any occupation will display the top 3 scores within each KSAW.

(This data is from "O*NET OnLine" by the National Center for O*NET Development. Used under the CC BY 4.0 license.).

APPENDIX 1: KENTUCKY'S LOCAL WORKFORCE AREAS AND WORKFORCE PLANNING REGIONS

Local Workforce Area	Workforce Planning Region
BLUEGRASS	CENTRAL
KENTUCKIANA WORKS	CENTRAL
LINCOLN TRAIL	CENTRAL
NORTHERN KENTUCKY	CENTRAL
EKCEP	EAST
TENCO	EAST
CUMBERLANDS	SOUTH
SOUTH CENTRAL	SOUTH
GREEN RIVER	WEST
WEST KENTUCKY	WEST

APPENDIX 2: CLASSIFICATION OF ACADEMIC MAJORS INTO MAJOR GROUPS

Major Group	2-Digit CIP Code	2-Digit CIP Family Title
Arts & Humanities	05	Area, Ethnic, Cultural, Gender, & Group Studies
	16	Foreign Languages, Literatures, & Linguistics
	23	English Language & Literature/Letters
	24	Liberal Arts & Sciences, General Studies & Humanities
	30	Multi/Interdisciplinary Studies
	38	Philosophy & Religious Studies
	39	Theology & Religious Vocations
	50	Visual & Performing Arts
Business & Communication	54	History
	09	Communication, Journalism, & Related Programs
	10	Communications Technologies/Technicians & Support Services
Education	52	Business, Management, Marketing, & Related Support Services
	13	Education
Health	51	Health Professions & Related Programs
Social & Behavioral Sciences & Human Services	19	Family & Consumer Sciences/Human Sciences
	22	Legal Professions & Studies
	25	Library Science
	31	Parks, Recreation, Leisure, & Fitness Studies
	42	Psychology
	44	Public Administration & Social Service Professions
	45	Social Sciences
STEM	01	Agriculture, Agriculture Operations, & Related Sciences
	03	Natural Resources & Conservation
	04	Architecture & Related Services
	11	Computer & Information Sciences & Support Services
	14	Engineering
	15	Engineering Technologies & Engineering-related Fields
	26	Biological & Biomedical Sciences
	27	Mathematics & Statistics
	28	Military Science, Leadership & Operational Art
	40	Physical Sciences
Trades	41	Science Technologies/Technicians
	12	Personal & Culinary Services
	43	Homeland Security, Law Enforcement, Firefighting & Related Protective Services
	46	Construction Trades
	47	Mechanic & Repair Technologies/Technicians
	48	Precision Production
	49	Transportation & Materials Moving

APPENDIX 3: SOCS REDACTED IN KY LMI OCCUPATIONAL OUTLOOKS, 2014-2024

SOC_Code	Bluegrass	Cumberlands	EKCEP	Green River	Kentuckiana Works	Kentucky	Lincoln Trail	Northern Kentucky	South Central	TENCO	Western Kentucky
11-1011	X	X	X	X	X	X	X	X	X	X	X
11-1031						X					X
11-2011		X	X	X			X	X	X	X	X
11-2021			X								
11-2031		X		X			X	X	X	X	X
11-3051			X								
11-3061			X	X			X			X	
11-3111		X	X	X			X		X	X	X
11-3121										X	
11-3131		X	X	X			X		X	X	X
11-9021							X				
11-9031		X	X	X				X	X	X	X
11-9033										X	
11-9039				X							
11-9041										X	
11-9061		X	X	X			X				
11-9071				X	X	X		X			
11-9081			X	X	X				X		X
11-9121		X	X	X		X	X		X	X	X
11-9161		X		X					X	X	X
13-1011	X				X	X	X				
13-1021	X	X	X	X			X	X		X	X
13-1022		X	X	X			X	X	X	X	
13-1023										X	
13-1032	X	X		X	X	X		X		X	X
13-1051			X								
13-1075							X				
13-1081			X								
13-1111	X	X	X	X	X		X	X	X	X	X
13-1121		X	X								
13-1131		X	X	X			X		X	X	X
13-1141			X	X			X			X	X
13-1151										X	
13-1161										X	
13-2021		X	X	X			X	X	X	X	X
13-2031			X	X				X	X	X	
13-2041		X					X			X	
13-2051		X	X				X			X	X
13-2052											X
13-2053		X	X	X				X	X		X
13-2061		X		X						X	
13-2071		X		X			X		X	X	
13-2081		X					X		X	X	
13-2082									X	X	
15-1111	X		X		X	X		X			
15-1121			X								
15-1122	X	X	X	X	X	X	X		X	X	X
15-1131			X					X		X	X
15-1132			X	X							X
15-1133			X	X						X	
15-1134		X	X	X			X	X	X	X	
15-1141			X	X			X	X		X	
15-1143				X			X			X	
15-1152			X				X			X	X
15-1199		X							X	X	
15-2011	X				X						
15-2021	X				X			X			
15-2031		X	X	X				X		X	X
15-2041		X	X	X			X	X		X	X
15-2099	X				X						
17-1011		X	X	X			X		X		X
17-1012		X	X	X			X	X	X	X	X
17-1021			X	X			X	X	X	X	X
17-1022		X					X		X		
17-2011	X		X		X						X
17-2021		X		X	X	X	X	X	X	X	X
17-2031	X		X	X	X			X		X	X
17-2041				X			X		X	X	



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17-2061	X	X			X	X		X			X
17-2071			X				X		X		
17-2072		X	X	X			X	X		X	X
17-2081			X	X			X	X	X	X	
17-2111		X	X	X			X	X		X	
17-2112			X								
17-2121										X	X
17-2131	X		X	X			X	X	X		X
17-2141			X							X	
17-2151	X	X	X		X			X			
17-2161						X					X
17-2171	X				X	X			X	X	
17-2199			X							X	
17-3011		X					X		X		
17-3012	X	X	X	X	X		X	X	X	X	X
17-3013			X								
17-3019		X	X	X	X		X	X	X	X	
17-3021	X					X					X
17-3023		X	X								
17-3024	X	X		X	X	X		X			X
17-3025		X	X	X	X			X	X	X	X
17-3026		X			X					X	
17-3027		X	X				X			X	X
17-3029		X	X	X			X	X	X	X	
17-3031								X		X	
19-1011	X	X		X							
19-1012	X	X	X	X	X		X	X	X	X	X
19-1013		X	X				X	X	X	X	X
19-1021	X				X			X			X
19-1022									X	X	X
19-1023			X	X	X		X	X	X	X	
19-1029				X			X			X	
19-1031			X		X		X	X		X	
19-1032				X	X		X	X	X		
19-1041		X	X		X	X	X	X	X	X	X
19-1042	X			X		X				X	X
19-1099		X			X		X	X		X	X
19-2011						X		X	X		X
19-2012	X	X			X			X	X		X
19-2021	X								X		
19-2031					X		X	X	X	X	
19-2032	X			X	X	X		X	X		
19-2041		X					X				
19-2042			X	X				X	X	X	X
19-2043	X				X				X		X
19-2099			X	X	X		X	X	X	X	X
19-3011			X		X			X	X	X	X
19-3022	X			X			X	X			X
19-3031										X	
19-3032						X					
19-3039		X	X	X						X	
19-3041						X					X
19-3051	X	X		X			X			X	
19-3091	X	X					X	X		X	X
19-3092					X				X		
19-3093	X		X		X		X	X			X
19-3099				X				X	X		
19-4011			X				X			X	
19-4021		X	X	X					X	X	X
19-4031		X		X	X		X		X	X	
19-4041	X	X	X	X	X			X	X		X
19-4051						X					
19-4061	X				X			X			X
19-4091			X	X	X		X		X	X	X
19-4092		X			X	X	X	X		X	X
19-4093				X	X		X	X	X		
19-4099		X									
21-1011				X			X	X	X	X	X
21-1013	X	X	X	X	X		X	X			X
21-1014				X							
21-1019	X		X	X	X		X	X		X	X
21-1023				X			X	X		X	
21-1091		X					X	X	X	X	

21-1094		X		X			X	X	X	X	X
21-1099		X	X	X			X	X	X	X	X
21-2011		X	X							X	
21-2021	X	X	X		X					X	
21-2099	X				X						
23-1012	X				X			X	X	X	X
23-1021		X	X				X		X	X	X
23-1022	X				X			X		X	
23-1023							X				
23-2091	X	X	X	X	X	X		X			
23-2093	X	X	X	X			X	X	X	X	X
23-2099		X			X		X	X	X	X	X
25-1011			X				X	X		X	
25-1021			X	X			X	X		X	
25-1022			X				X	X	X	X	
25-1031	X								X		
25-1032					X				X	X	X
25-1041	X	X		X	X				X		X
25-1042			X	X			X	X	X	X	
25-1043	X					X					
25-1051	X	X	X		X		X	X		X	X
25-1052		X	X	X			X	X	X	X	X
25-1053	X	X	X	X	X	X		X	X		
25-1054		X	X	X			X	X	X	X	X
25-1061					X		X	X	X	X	X
25-1062	X				X		X				
25-1063		X	X	X	X		X	X	X	X	X
25-1064				X	X		X	X	X	X	X
25-1065		X	X	X	X			X	X	X	X
25-1066		X	X	X			X	X	X	X	
25-1067		X	X	X	X		X	X	X	X	X
25-1069	X		X	X	X	X				X	X
25-1071		X	X	X			X	X		X	
25-1072	X		X	X			X		X	X	X
25-1081			X		X		X	X	X	X	X
25-1082	X	X			X				X		
25-1111		X	X	X	X		X	X	X	X	X
25-1112	X				X			X		X	X
25-1113		X	X	X	X		X	X	X	X	X
25-1121			X	X			X	X	X	X	X
25-1122	X		X	X			X	X	X	X	
25-1123			X	X			X	X	X	X	
25-1124		X	X	X	X		X	X	X	X	X
25-1125			X	X			X	X	X	X	
25-1126		X	X	X			X	X	X	X	X
25-1191	X							X	X		X
25-1192				X					X	X	X
25-1193		X	X	X	X			X	X	X	X
25-1194							X				
25-1199		X	X	X			X	X	X	X	
25-2023					X	X		X	X		X
25-2032				X					X		
25-2051		X	X	X	X		X	X	X	X	X
25-2059		X						X	X	X	X
25-3011	X				X			X	X		
25-3021			X							X	X
25-3098	X		X		X			X	X		X
25-4011	X	X			X	X		X	X	X	X
25-4012				X	X		X	X	X		X
25-4013	X	X			X		X	X	X		X
25-4021			X								
25-4031		X	X	X			X		X		
25-9011	X				X	X					X
25-9021	X				X			X	X	X	X
25-9031								X	X	X	
27-1011	X	X							X		X
27-1012	X				X	X			X		X
27-1013	X			X	X		X	X	X		X
27-1014	X							X			X
27-1019	X				X		X	X			X
27-1021	X	X		X	X		X	X	X	X	X
27-1022	X				X	X		X			
27-1025		X	X	X			X		X	X	X



27-1027	X		X		X		X	X			X
27-1029	X	X		X	X	X		X			X
27-2011	X		X		X			X			X
27-2012		X		X			X	X			
27-2021	X	X	X	X			X	X	X	X	X
27-2023					X			X	X	X	
27-2031	X					X		X	X		
27-2032	X				X	X					
27-2041	X	X	X	X	X			X		X	X
27-2042	X	X			X		X	X		X	X
27-2099		X			X		X	X	X	X	X
27-3011				X				X		X	
27-3012	X				X		X	X			X
27-3021	X				X						X
27-3022				X			X	X	X	X	
27-3041			X	X			X	X		X	
27-3042		X	X				X	X	X	X	X
27-3043		X	X				X	X	X	X	X
27-3091			X	X			X			X	X
27-3099	X		X	X				X	X	X	X
27-4011		X	X	X	X		X	X	X	X	X
27-4012		X	X	X			X	X		X	X
27-4014	X							X	X	X	X
27-4021		X	X				X	X	X	X	X
27-4031		X	X	X	X		X	X	X	X	X
27-4032	X							X	X	X	X
27-4099		X			X		X	X	X	X	X
29-1011		X						X	X		X
29-1021		X	X					X	X		
29-1022	X				X	X		X	X		
29-1023	X	X		X	X	X		X			
29-1029		X	X		X		X			X	X
29-1041		X		X			X				X
29-1061	X	X	X	X	X		X	X	X	X	X
29-1062					X					X	
29-1063				X	X			X		X	X
29-1064			X	X	X					X	X
29-1065	X	X	X	X	X		X	X	X		X
29-1066		X	X	X	X		X	X	X	X	X
29-1067		X	X		X		X	X		X	X
29-1069		X		X						X	
29-1071		X	X						X	X	
29-1081	X	X					X	X		X	X
29-1124	X		X	X			X	X		X	X
29-1125		X	X	X			X	X	X	X	X
29-1128	X	X	X		X			X	X	X	X
29-1129				X				X	X	X	X
29-1131										X	
29-1151		X	X		X		X	X	X	X	X
29-1161		X	X	X	X		X	X		X	X
29-1171								X			
29-1181	X	X	X	X	X		X	X	X	X	X
29-1199				X			X	X	X		X
29-2011								X			
29-2012								X			
29-2021		X									
29-2031			X				X	X	X		X
29-2032			X				X	X			
29-2033			X	X			X	X			X
29-2034								X			
29-2035							X	X			X
29-2041				X			X				
29-2051	X	X					X		X	X	X
29-2053		X		X	X		X	X		X	X
29-2054				X	X		X	X	X	X	X
29-2055								X			
29-2056									X	X	
29-2057	X						X	X	X		X
29-2081		X	X		X		X	X	X	X	X
29-2091	X				X	X	X	X	X		X
29-2092	X		X	X	X	X	X	X	X		X
29-2099			X	X			X	X			
29-9011										X	



29-9012	X	X			X	X	X	X	X	X	X
29-9091			X	X				X	X	X	X
29-9092	X				X	X		X			
29-9099		X	X	X			X	X	X	X	X
31-1011				X				X			X
31-1013			X	X	X		X	X	X	X	X
31-1015			X	X	X		X	X	X	X	X
31-2011	X	X	X	X			X	X	X	X	X
31-2012	X	X	X	X	X			X			X
31-2022		X	X	X	X		X		X	X	X
31-9011		X	X							X	X
31-9093	X		X	X			X	X	X	X	
31-9094							X	X			
31-9095	X	X	X	X			X	X		X	X
31-9096							X			X	
31-9097								X			
31-9099									X		
33-1011				X			X		X	X	
33-1021			X								X
33-1099			X	X			X		X	X	X
33-2011		X	X	X			X	X	X	X	X
33-2021	X	X	X	X			X	X	X	X	X
33-2022	X					X			X		
33-3011		X			X		X				
33-3021							X			X	
33-3031			X	X	X		X	X	X	X	X
33-3041	X		X	X	X	X	X	X	X	X	X
33-3052	X	X			X				X		
33-9011		X	X			X			X	X	
33-9021	X	X	X	X	X		X	X	X		X
33-9031				X		X					
33-9091				X	X		X	X	X	X	X
33-9092		X					X			X	X
33-9093	X			X						X	X
33-9099				X	X			X		X	
35-1011									X		
35-1012									X		
35-2011		X					X				
35-2013	X			X				X	X	X	X
35-2015	X	X	X	X			X	X	X	X	X
35-2019		X	X	X			X	X		X	
35-3022		X	X	X			X	X	X	X	X
35-3041		X	X	X			X	X	X	X	X
35-9011	X	X		X			X	X		X	X
35-9021					X						
35-9099	X	X		X	X		X	X		X	X
37-1011		X					X			X	
37-1012		X					X			X	
37-2012								X			
37-2019	X		X	X		X					
37-2021	X		X	X		X		X			
37-3012			X							X	
37-3013				X					X		
37-3019		X		X			X	X		X	X
39-1011					X	X		X			
39-1012	X			X	X	X	X	X	X		X
39-1021	X			X			X		X		X
39-2011		X		X						X	
39-2021			X								
39-3011					X	X					
39-3012				X	X			X			
39-3019				X		X					
39-3021				X		X				X	
39-3031	X	X	X	X				X			X
39-3091							X				
39-3092	X			X	X	X			X		
39-3093	X			X	X	X		X			
39-3099	X	X	X	X	X	X	X	X	X	X	X
39-4011		X	X	X	X			X	X	X	X
39-4021		X	X	X	X			X	X	X	
39-4031		X		X	X		X	X			X
39-5011			X		X		X				X
39-5012		X		X			X		X		



39-5092	X	X		X				X		X	X
39-5094	X		X	X	X			X	X	X	X
39-6011	X				X			X			
39-6012	X				X	X		X			
39-7011		X	X	X				X		X	
39-7012	X	X		X	X	X	X	X	X	X	X
39-9031		X	X	X						X	X
39-9032							X			X	
39-9041				X					X	X	
39-9099		X	X	X			X		X	X	X
41-2012	X										X
41-2021											X
41-2022	X										
41-3011				X			X	X		X	X
41-3031		X	X								
41-3041		X		X			X	X		X	X
41-3099			X								
41-4011		X									
41-9011		X		X			X		X		
41-9012					X	X			X		X
41-9021	X	X	X		X	X	X		X		X
41-9022							X				
41-9031		X	X	X			X	X	X	X	X
41-9041	X	X					X	X	X		X
41-9091		X		X			X			X	
41-9099			X							X	
43-1011			X	X						X	
43-2011			X	X			X	X		X	
43-2021	X					X		X			
43-2099	X						X				
43-3011										X	
43-3041	X			X		X					
43-3061			X	X			X	X	X	X	X
43-3099	X		X	X		X	X	X	X		X
43-4011			X	X			X	X	X	X	X
43-4021	X				X		X	X			X
43-4041	X	X	X	X	X		X	X	X	X	X
43-4121							X				
43-4141		X	X	X			X	X		X	X
43-4151			X								
43-4181			X	X				X	X		X
43-5011			X							X	X
43-5031								X			
43-5041				X			X	X		X	
43-5053			X	X		X	X			X	X
43-5061			X								
43-5081					X						
43-5111			X								
43-9011							X		X	X	
43-9022		X	X	X				X	X		X
43-9031	X	X	X		X			X	X		X
43-9041		X	X				X			X	
43-9051		X	X	X					X	X	
43-9071		X	X	X			X		X	X	X
43-9081	X	X		X				X		X	X
43-9111	X		X		X		X	X			
45-1011			X					X			
45-2011			X		X		X	X	X	X	
45-2021				X	X		X	X	X	X	X
45-2041		X					X	X	X	X	
45-2091		X	X				X	X			
45-2093			X								
45-2099		X		X	X		X	X		X	
45-4011	X	X	X	X	X		X	X	X	X	X
45-4021	X	X	X	X	X	X	X	X	X	X	X
45-4022					X		X	X	X	X	
45-4023		X		X			X			X	X
45-4029	X			X		X	X		X	X	
47-2011	X	X	X	X				X	X	X	
47-2021		X	X				X			X	
47-2022	X				X	X			X		
47-2041	X	X	X	X	X		X	X			
47-2042	X				X			X			X

47-2043					X	X		X	X		X
47-2044	X	X						X	X		X
47-2053					X	X					
47-2071				X						X	X
47-2072	X	X		X	X	X					
47-2081		X	X	X			X	X	X	X	X
47-2082	X			X	X			X			X
47-2111			X								
47-2121		X	X	X	X		X	X	X	X	X
47-2131	X	X	X	X	X		X		X		X
47-2132	X				X						X
47-2142	X				X	X		X			
47-2151	X	X	X		X		X	X			X
47-2161		X	X	X			X	X		X	
47-2171	X		X		X		X	X	X	X	X
47-2181			X	X			X			X	
47-2211			X				X	X		X	X
47-2221			X	X			X	X		X	
47-2231						X					X
47-3011		X	X		X		X		X		X
47-3012	X	X	X	X	X		X	X	X	X	X
47-3013		X	X	X			X	X		X	X
47-3014					X	X			X		X
47-3015		X	X		X		X		X	X	
47-3016	X				X			X			X
47-3019	X	X			X	X			X		
47-4011							X			X	
47-4021	X				X	X		X			
47-4031	X	X		X	X				X	X	X
47-4041	X		X	X				X	X		X
47-4061						X			X	X	
47-4071		X	X	X	X		X	X		X	X
47-4099		X	X	X					X	X	X
47-5011			X			X					
47-5012			X							X	
47-5013		X		X					X		
47-5021	X	X	X	X	X		X	X	X	X	X
47-5031		X	X		X			X		X	X
47-5041	X							X	X		X
47-5042	X	X	X	X	X						X
47-5049		X	X	X		X		X			X
47-5051	X	X				X				X	X
47-5061	X							X			
47-5071		X		X	X				X		X
47-5081					X		X				
47-5099		X	X	X	X	X		X	X		X
49-2011		X	X	X			X		X	X	
49-2021	X	X	X	X	X		X		X	X	X
49-2022								X			
49-2091	X				X		X	X			X
49-2092	X	X	X	X			X	X	X	X	X
49-2093									X		X
49-2094		X	X					X		X	
49-2095	X	X	X	X			X	X	X	X	
49-2096	X			X	X	X	X		X		X
49-2097	X		X		X		X		X		X
49-2098				X			X		X	X	
49-3011		X		X						X	X
49-3021			X							X	
49-3022	X		X	X	X		X	X		X	X
49-3043							X		X	X	X
49-3051	X		X	X	X		X	X	X	X	X
49-3052	X	X					X	X		X	X
49-3053	X		X	X			X	X	X		
49-3091			X		X	X			X		
49-3092	X			X	X	X	X				X
49-3093			X	X			X	X			
49-9011		X	X	X	X		X		X		X
49-9012							X	X	X	X	
49-9031		X	X	X	X		X	X	X	X	X
49-9043								X		X	
49-9044								X	X		
49-9045				X						X	



49-9051									X		
49-9052		X		X	X		X	X		X	
49-9061	X				X	X					X
49-9062	X	X	X	X			X	X	X		X
49-9063	X		X		X	X		X	X	X	X
49-9064	X		X		X	X					X
49-9069	X	X	X				X		X		
49-9091	X	X	X	X			X	X	X		X
49-9092	X									X	X
49-9094		X		X	X		X	X	X	X	X
49-9095						X		X		X	
49-9096	X	X	X	X	X		X	X	X	X	X
49-9097							X				
49-9098		X	X					X			
51-2011						X		X			
51-2021	X	X			X		X	X	X	X	X
51-2022		X	X	X			X		X	X	X
51-2023	X			X	X	X	X		X		
51-2031	X	X	X	X	X	X	X	X	X		X
51-2041		X	X	X			X	X	X	X	X
51-2091		X			X			X	X		X
51-2092			X								
51-2093					X	X					
51-2099			X							X	
51-3011			X								
51-3021				X							
51-3022		X	X				X			X	
51-3023			X		X		X		X		
51-3091	X	X	X	X	X		X	X	X	X	X
51-3092	X	X	X				X		X	X	
51-3093	X	X	X				X	X	X		X
51-3099			X								
51-4011		X	X	X			X	X		X	X
51-4012		X	X	X			X		X	X	X
51-4021		X	X				X	X	X	X	X
51-4022		X					X		X	X	X
51-4023		X	X				X	X		X	X
51-4031		X	X								
51-4032	X	X	X	X	X		X	X	X		X
51-4033			X				X				
51-4034	X	X		X			X	X	X	X	X
51-4035		X		X	X		X	X	X	X	X
51-4051	X				X			X	X	X	X
51-4052	X							X	X	X	X
51-4061	X			X		X	X		X	X	
51-4062					X	X			X		X
51-4071				X	X	X			X		X
51-4072	X	X					X			X	X
51-4081		X	X				X		X	X	X
51-4111		X	X					X		X	X
51-4122	X	X		X			X	X	X	X	X
51-4191	X	X		X			X	X	X	X	X
51-4192	X		X	X	X	X	X	X			
51-4193	X	X							X	X	X
51-4194	X		X	X	X		X	X	X	X	X
51-4199	X	X					X	X	X		X
51-5111		X	X	X			X		X	X	X
51-5113		X	X	X			X		X	X	X
51-6011			X				X			X	
51-6021				X							
51-6031			X	X			X		X	X	X
51-6041	X				X			X			
51-6051	X					X				X	X
51-6052	X		X		X		X	X	X		X
51-6061		X		X		X		X			X
51-6062	X	X	X	X	X	X	X	X			X
51-6063		X		X				X			X
51-6064						X		X			X
51-6091	X	X		X	X		X	X	X	X	X
51-6092	X				X	X	X				
51-6093	X	X		X	X			X	X		
51-6099	X	X	X		X		X	X	X		
51-7011		X	X					X		X	X

51-7021	X	X			X		X		X		X
51-7041				X	X		X				
51-7042			X	X					X	X	
51-7099	X				X			X			X
51-8012	X	X	X		X		X	X		X	X
51-8013		X	X	X				X		X	
51-8021	X		X					X			
51-8091	X			X	X						
51-8092	X	X	X		X						X
51-8093	X	X	X				X	X	X	X	X
51-8099		X	X				X	X	X	X	
51-9011				X			X	X	X	X	
51-9012		X	X					X		X	
51-9021		X					X	X	X	X	
51-9022	X	X		X			X	X	X	X	X
51-9023			X								
51-9031	X	X			X	X	X	X	X		
51-9032		X									
51-9041	X	X	X	X	X		X	X	X	X	X
51-9051			X	X	X		X		X	X	X
51-9071	X	X	X	X	X			X	X	X	
51-9081		X	X				X		X		X
51-9082	X				X	X		X		X	X
51-9083	X	X	X	X	X		X	X	X	X	X
51-9111			X				X		X		
51-9121			X								
51-9122			X								
51-9123	X	X	X	X	X		X	X	X	X	X
51-9141	X	X		X	X	X	X	X	X	X	X
51-9151	X		X	X	X		X	X	X	X	X
51-9191	X			X	X			X	X	X	X
51-9192	X	X		X	X		X	X		X	X
51-9193	X	X	X				X	X		X	
51-9194	X	X	X	X	X		X	X	X	X	X
51-9195	X	X		X			X	X	X	X	
51-9196	X			X			X	X			
51-9197	X	X	X		X				X	X	
51-9198			X				X			X	
51-9199			X								
53-1011	X		X	X	X	X		X	X		X
53-1021			X	X	X	X			X		X
53-1031	X							X			
53-2011	X			X				X	X		X
53-2012	X	X	X	X				X	X	X	X
53-2021						X	X				
53-2022	X				X		X	X			
53-2031					X	X		X			
53-3021	X	X	X	X			X		X	X	
53-3041				X				X	X		X
53-3099		X	X				X	X	X	X	X
53-4011						X				X	
53-4013	X	X	X				X		X	X	X
53-4021							X	X	X	X	
53-4031											X
53-4099	X	X							X		X
53-5011				X	X				X	X	X
53-5021	X	X	X		X		X	X	X	X	
53-5022	X	X	X	X	X		X	X	X	X	X
53-5031				X		X		X		X	X
53-6011	X	X				X		X	X		X
53-6021	X	X	X				X		X	X	X
53-6031		X	X		X					X	
53-6041	X				X	X				X	X
53-6051			X	X			X	X	X	X	X
53-6099		X	X	X			X		X	X	X
53-7011		X	X				X				
53-7021		X	X				X	X		X	X
53-7031						X					
53-7032								X	X	X	
53-7033	X	X	X	X	X		X	X			
53-7041		X	X	X		X	X	X	X	X	X
53-7063				X	X		X	X	X	X	X
53-7071		X	X			X					X



53-7072			X		X	X	X	X		X	
53-7073	X			X					X		X
53-7081							X				
53-7111	X		X					X			
53-7121	X			X	X		X	X	X		X
53-7199		X	X	X			X	X		X	X

APPENDIX 4: SOCS REDACTED IN KY LMI WAGE ESTIMATES, 2016

SOC_Code	Bluegrass	Cumberlands	EKCEP	Green River	Kentuckiana Works	Kentucky	Lincoln Trail	Northern Kentucky	South Central	TENCO	Western Kentucky
11-1011	X	X	X	X	X	X	X	X	X	X	X
11-1031						X					X
11-2011		X	X	X			X			X	X
11-2031							X				
11-3011	X										
11-3111		X	X	X			X			X	X
11-3131		X		X						X	
11-9013		X		X	X		X	X	X	X	X
11-9031				X							
11-9033										X	
11-9039				X							
11-9061		X	X	X	X		X			X	X
11-9071				X	X	X		X			
11-9081			X								
11-9121		X		X			X				
11-9161		X		X					X		
13-1011	X				X	X	X				
13-1021	X		X	X			X	X		X	
13-1031			X								
13-1032	X	X		X				X		X	X
13-1075		X									
13-1081			X								
13-1121		X	X								
13-1131				X							X
13-1141										X	
13-2021				X			X				X
13-2031				X							
13-2041							X			X	
13-2051		X	X	X			X				
13-2052		X	X							X	X
13-2053		X	X	X				X	X		X
13-2061		X		X						X	
13-2071		X					X			X	
13-2081							X			X	
13-2082										X	
15-1111	X		X		X			X			
15-1121									X		
15-1122		X	X	X						X	
15-1131			X								
15-1133			X							X	
15-1134				X							
15-1141										X	
15-1143										X	
15-2011	X				X	X					
15-2021	X				X			X			
15-2031		X	X	X			X			X	X
15-2041		X	X	X			X	X		X	X
15-2099	X				X	X					
17-1011		X	X	X			X		X	X	
17-1012		X	X	X			X		X	X	X
17-1021			X	X	X		X	X	X	X	
17-2011	X		X		X	X					X
17-2021	X	X		X	X		X	X	X	X	X
17-2031	X		X	X				X		X	X
17-2041				X					X		



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17-2051										X	
17-2061		X									X
17-2072		X	X	X						X	
17-2111		X	X	X				X		X	
17-2121						X				X	X
17-2131	X		X	X			X		X		X
17-2151		X			X	X		X			
17-2161						X					X
17-2171	X			X	X	X			X	X	
17-2199		X	X							X	
17-3011		X					X		X		
17-3012		X	X	X			X			X	
17-3013			X								
17-3019		X	X					X	X	X	
17-3021	X					X					X
17-3023		X									
17-3024	X	X		X				X			X
17-3025		X	X	X				X		X	
17-3027		X	X								
17-3029		X	X	X			X		X		
19-1011	X	X	X	X		X					
19-1012	X	X	X	X	X		X	X	X	X	X
19-1013		X	X				X	X	X	X	X
19-1021					X						X
19-1022									X	X	X
19-1023				X			X		X	X	
19-1029				X			X			X	
19-1031								X			
19-1032	X		X	X	X		X	X	X	X	
19-1041		X	X		X		X	X	X	X	X
19-1042				X						X	X
19-1099		X			X		X	X		X	X
19-2011						X		X	X		X
19-2012		X			X	X		X	X		X
19-2021	X		X						X		X
19-2032	X			X	X			X	X		
19-2041							X				
19-2042			X	X				X	X	X	X
19-2043	X								X		X
19-2099			X	X			X	X	X	X	X
19-3011			X					X		X	X
19-3022				X			X	X			X
19-3032						X					
19-3039		X	X	X	X		X	X		X	
19-3041						X					X
19-3051		X		X			X				
19-3091		X					X	X		X	X
19-3092					X	X			X		
19-3093			X		X		X	X			X
19-3094	X					X					
19-3099				X			X	X	X	X	
19-4011		X	X				X	X		X	X
19-4021		X	X	X					X	X	X
19-4031		X					X				
19-4041		X		X	X			X	X		X
19-4051						X					
19-4061					X			X			X
19-4091							X		X	X	
19-4092		X			X		X	X		X	X
19-4093				X	X		X	X	X		
19-4099		X		X			X		X		
21-1011									X		
21-1013		X	X	X			X	X			X
21-1014				X							
21-1015							X				
21-1019			X	X			X	X		X	X
21-1023				X			X				
21-1029	X	X		X			X	X	X	X	
21-1091				X							
21-1092		X	X	X	X		X	X	X	X	X
21-1094										X	
21-1099		X								X	
21-2011		X					X	X			



21-2021	X		X							X	
21-2099	X				X						
23-1012	X	X	X		X			X	X	X	X
23-1021	X	X	X				X	X	X	X	X
23-1022	X				X	X		X		X	
23-1023	X	X		X	X		X	X	X	X	X
23-2091	X	X		X	X			X			
23-2093	X	X	X	X			X		X	X	X
23-2099		X	X				X	X	X	X	
25-1011							X	X		X	
25-1021			X	X			X	X		X	
25-1022			X				X	X	X	X	
25-1031	X								X		
25-1032					X			X	X	X	X
25-1041	X	X		X	X				X		X
25-1042			X	X			X	X	X	X	
25-1043	X					X					
25-1051	X	X	X		X		X	X		X	X
25-1052			X	X			X	X	X	X	X
25-1053	X	X		X	X			X	X		
25-1054		X	X	X			X	X	X	X	X
25-1061					X		X	X	X	X	X
25-1062	X				X		X				
25-1063		X	X	X			X	X	X	X	
25-1064				X	X		X	X	X	X	X
25-1065		X	X	X	X			X	X	X	X
25-1066				X			X	X	X	X	
25-1067		X	X	X			X	X	X	X	
25-1069	X		X	X	X					X	X
25-1071				X			X	X		X	
25-1072	X			X			X		X	X	
25-1081							X	X	X	X	
25-1082	X	X			X				X		
25-1111				X	X		X	X	X	X	
25-1112	X				X			X		X	X
25-1113		X		X	X		X	X	X	X	X
25-1121			X	X			X	X	X	X	
25-1122	X		X	X			X	X	X	X	
25-1123				X			X	X	X	X	
25-1124		X	X	X	X		X	X	X	X	X
25-1125			X	X			X	X	X	X	
25-1126			X	X			X	X	X	X	X
25-1191	X							X	X		X
25-1192				X					X	X	X
25-1193		X	X	X	X			X	X	X	X
25-1199				X			X		X	X	
25-2023					X			X	X		X
25-2032				X					X		
25-2051		X	X	X			X	X	X	X	X
25-2059									X	X	
25-3011							X				
25-3021			X							X	
25-3098	X		X		X			X	X		X
25-4011		X			X			X	X		X
25-4012				X	X		X	X	X		X
25-4013	X	X			X		X	X	X		X
25-9011	X				X						X
25-9021					X			X	X	X	X
27-1011		X							X		X
27-1012					X				X		X
27-1013				X			X	X	X		X
27-1014	X							X			X
27-1019	X				X		X	X			X
27-1021				X			X	X		X	X
27-1022	X				X			X			
27-1025		X	X	X			X		X	X	
27-1027	X		X		X		X	X			X
27-1029	X	X		X				X			X
27-2011	X		X		X	X		X			X
27-2012		X					X			X	
27-2021		X	X	X			X			X	
27-2022				X							
27-2023								X	X	X	



27-2031	X					X		X	X		
27-2032	X				X	X					
27-2041	X	X	X	X		X		X		X	X
27-2042	X	X			X	X	X	X		X	X
27-2099	X	X			X	X	X	X	X	X	X
27-3011				X							
27-3012					X		X	X			X
27-3021					X						X
27-3022				X			X	X			
27-3041				X							
27-3042		X							X	X	X
27-3043				X			X			X	
27-3091			X	X			X			X	
27-3099			X	X					X	X	X
27-4011			X	X			X		X	X	
27-4012		X	X	X			X	X		X	X
27-4014	X							X	X	X	X
27-4021		X	X				X			X	
27-4031		X	X	X			X	X	X	X	X
27-4032								X	X	X	X
27-4099		X					X	X	X	X	X
29-1011		X						X	X		X
29-1021		X					X	X			
29-1022	X				X			X	X		
29-1023	X	X		X	X						
29-1029	X	X	X		X		X			X	X
29-1041		X									
29-1061	X	X		X		X	X	X	X		
29-1063								X		X	X
29-1064				X						X	X
29-1065				X					X		X
29-1066		X	X	X			X	X	X		X
29-1067								X			
29-1069	X										
29-1081		X					X	X		X	X
29-1124	X		X	X			X	X			X
29-1125		X	X	X			X		X	X	X
29-1126				X							
29-1128	X	X	X	X	X			X	X	X	X
29-1129									X	X	
29-1131									X	X	
29-1151		X							X		
29-1161		X	X	X			X	X		X	
29-1181		X	X	X			X	X	X	X	X
29-1199	X			X	X		X		X		X
29-2012								X			
29-2031								X			
29-2032								X			
29-2035								X			
29-2051		X					X			X	X
29-2053				X	X		X	X		X	X
29-2054				X			X	X	X	X	X
29-2056										X	
29-2057	X						X	X	X		X
29-2081		X					X				
29-2091							X	X	X		X
29-2092	X		X	X	X		X	X	X		X
29-9012		X					X	X	X		
29-9091			X	X						X	X
29-9092	X				X			X			
29-9099				X			X			X	
31-1011		X									
31-1013			X	X	X			X	X	X	X
31-1015			X	X				X			X
31-2011							X			X	
31-2012	X	X	X	X	X						X
31-9011		X	X								X
31-9093							X	X	X		
31-9095		X		X			X	X			X
31-9096				X			X			X	
33-1011				X					X		
33-1099							X				
33-2011			X								



33-2021		X	X	X			X	X	X	X	X
33-2022	X					X			X		
33-3011		X			X		X				
33-3031	X	X	X	X	X	X	X	X	X	X	X
33-3041	X		X	X	X		X	X	X	X	X
33-3052	X	X			X	X			X		
33-9011		X							X		
33-9021	X	X	X	X			X		X		X
33-9031				X		X					
33-9091				X	X		X	X	X	X	X
33-9092							X			X	
33-9093				X							X
33-9099				X							
35-1011										X	
35-2013	X	X	X	X	X	X	X	X	X	X	X
35-2015									X	X	
35-2019		X	X	X	X		X	X	X	X	
35-3011		X									
35-3022			X								
35-3041							X				
35-9011										X	
35-9099	X	X		X			X	X		X	X
37-2019	X		X	X							
37-2021								X			
37-3012	X		X					X		X	X
37-3013	X		X	X	X		X	X	X	X	
37-3019		X	X	X			X	X		X	X
39-1011					X	X		X			
39-1012	X			X	X		X	X	X		X
39-2011		X		X					X	X	
39-3011					X	X					
39-3012				X	X			X			
39-3019				X		X					
39-3021				X		X				X	
39-3031		X	X					X		X	X
39-3092	X			X	X	X			X		
39-3093	X			X	X			X			
39-3099	X	X		X	X	X	X	X	X	X	X
39-4011		X	X	X				X	X	X	
39-4021				X	X			X	X	X	
39-4031							X				
39-5011			X		X		X				X
39-5012				X							
39-5092	X	X		X				X		X	X
39-5094			X	X				X	X	X	
39-6011								X			
39-6012	X							X			
39-7011				X				X		X	X
39-7012	X	X		X	X	X	X	X	X	X	X
39-9031		X									
39-9032				X							
39-9099		X		X						X	X
41-2012	X										X
41-3031		X		X							
41-3041		X		X			X	X		X	X
41-4011		X									
41-9011		X	X	X			X		X	X	
41-9012					X				X		X
41-9021	X	X	X		X		X		X		X
41-9031		X	X	X			X			X	X
41-9041							X				
41-9091	X	X		X			X	X	X	X	X
41-9099										X	
43-2021	X					X		X			
43-2099	X						X				
43-3021							X				
43-3041	X			X		X					
43-3061									X	X	
43-3099			X	X			X	X	X		X
43-4011				X			X			X	X
43-4021							X	X			X
43-4041		X	X						X	X	
43-4061									X	X	



43-4141			X	X			X	X		X	
43-4181			X	X		X		X	X		X
43-4199				X							
43-5011			X							X	X
43-5041								X			
43-5053			X	X			X			X	
43-5081					X						
43-9011				X			X			X	
43-9022		X	X	X			X	X	X		
43-9031	X	X	X		X			X	X		X
43-9041										X	
43-9051			X	X						X	
43-9071			X	X						X	
43-9081		X		X				X		X	X
43-9111	X		X		X		X	X			
45-1011				X			X	X			
45-2011		X	X		X		X	X	X	X	
45-2021		X		X	X		X	X	X	X	X
45-2041	X	X		X			X	X	X	X	X
45-2091		X	X	X	X		X	X	X	X	X
45-2092		X	X	X						X	
45-2093			X	X			X	X		X	
45-2099	X	X		X	X		X	X	X	X	X
45-4011	X	X	X	X	X	X	X	X	X	X	X
45-4021	X	X	X	X	X		X		X	X	X
45-4022	X			X	X		X	X	X	X	
45-4023		X		X			X		X	X	X
45-4029	X			X		X	X		X	X	
47-2011	X	X	X	X				X	X	X	
47-2021			X				X			X	
47-2022					X				X		
47-2041	X	X	X	X			X				
47-2042	X				X			X			X
47-2043					X			X	X		X
47-2044	X	X						X	X		
47-2053					X	X					
47-2071				X							
47-2072	X	X		X	X						
47-2081		X	X	X			X		X	X	
47-2082	X			X	X			X			X
47-2121		X	X	X			X	X	X	X	X
47-2131			X	X			X		X		X
47-2132	X				X						
47-2142	X				X	X		X			
47-2151	X	X						X			X
47-2161	X	X	X	X	X		X	X		X	X
47-2171	X		X	X	X		X	X	X	X	X
47-2181			X	X			X			X	
47-2211							X				
47-2221		X	X				X		X	X	
47-2231						X					X
47-3011		X	X				X		X		X
47-3012				X				X	X		
47-3013		X	X				X				
47-3014					X				X		X
47-3015		X									
47-3016	X							X			X
47-3019		X							X		
47-4021	X							X			
47-4031	X	X		X	X				X	X	X
47-4041	X		X	X				X			
47-4061	X	X			X				X	X	
47-4071		X		X			X			X	
47-4099		X	X	X					X		
47-5012										X	
47-5013		X		X					X		
47-5021	X	X		X			X		X	X	
47-5031		X			X			X		X	X
47-5041	X							X			X
47-5042	X	X		X	X						X
47-5049		X		X				X			X
47-5051	X	X								X	X
47-5061	X							X			



47-5071		X		X	X			X		X
47-5081				X	X		X	X	X	
47-5099		X		X	X			X	X	X
49-2021		X	X	X			X	X	X	X
49-2091					X		X	X		X
49-2092		X	X				X	X	X	X
49-2093	X	X			X				X	
49-2094							X			
49-2095		X	X	X			X	X	X	X
49-2096				X			X		X	X
49-2097			X				X		X	
49-2098				X			X		X	X
49-3011		X		X			X		X	
49-3022	X		X	X			X	X		X
49-3041								X		
49-3043	X	X			X		X		X	X
49-3051	X		X	X	X		X	X	X	
49-3052	X	X					X	X		X
49-3053				X						
49-3091			X		X				X	
49-3092	X			X	X		X			
49-3093			X							
49-9011		X	X	X			X		X	X
49-9012									X	
49-9031			X				X	X	X	X
49-9044		X						X	X	
49-9045				X		X				X
49-9052				X						
49-9061	X				X	X				X
49-9062	X	X								
49-9063	X		X					X	X	X
49-9064	X		X		X	X				X
49-9069		X					X			
49-9091		X	X						X	X
49-9092	X								X	X
49-9094		X		X	X		X	X	X	X
49-9095						X		X		X
49-9096	X	X	X	X			X	X	X	X
49-9097	X	X			X		X		X	
51-2011						X		X		
51-2021		X					X	X	X	X
51-2022		X	X	X					X	
51-2023	X			X	X		X		X	
51-2031	X	X	X	X	X		X		X	X
51-2041		X	X				X			X
51-2091		X			X			X	X	X
51-2093				X		X				
51-3011		X								
51-3022	X	X					X		X	X
51-3023	X	X	X	X	X		X	X	X	X
51-3091	X	X	X	X			X	X	X	X
51-3092			X				X		X	X
51-3093	X	X	X		X		X	X	X	
51-3099	X		X	X			X			X
51-4011			X				X			X
51-4012		X	X				X			
51-4021			X				X		X	
51-4022		X					X		X	X
51-4023		X	X					X		X
51-4032			X	X			X		X	X
51-4033			X							X
51-4034	X	X		X					X	X
51-4035				X	X		X	X	X	X
51-4051	X				X			X	X	X
51-4052	X							X	X	X
51-4061				X			X		X	X
51-4062					X	X			X	X
51-4071				X	X				X	X
51-4081		X	X							X
51-4111		X	X							X
51-4122		X		X					X	X
51-4191	X	X					X		X	X
51-4192	X		X	X	X		X	X		



51-4193			X						X		
51-4194	X			X			X	X		X	X
51-4199	X		X				X	X	X		
51-5111					X		X			X	
51-5113			X	X	X					X	
51-6021			X	X	X					X	
51-6041	X					X		X			
51-6051	X									X	X
51-6052				X			X		X		
51-6061			X		X		X		X		X
51-6062	X		X	X	X	X	X		X		X
51-6063			X		X				X		X
51-6064							X		X		X
51-6091	X		X		X		X	X	X	X	X
51-6092	X				X	X	X				
51-6093			X		X				X	X	
51-6099	X		X		X		X		X	X	
51-7011				X					X		X
51-7021	X		X				X		X		X
51-7041							X				
51-7099	X					X		X			X
51-8012			X	X		X	X	X		X	X
51-8013			X	X	X				X		X
51-8021	X				X				X		X
51-8091	X				X	X					
51-8092	X		X		X	X					X
51-8093	X		X	X	X		X	X	X	X	X
51-8099	X		X	X	X		X	X	X	X	
51-9011					X		X	X	X	X	
51-9012			X	X					X		X
51-9021									X	X	
51-9022	X				X		X	X	X	X	
51-9031			X			X	X	X	X		
51-9032			X							X	X
51-9041			X	X						X	
51-9051	X					X			X	X	
51-9071	X		X	X		X		X	X	X	
51-9081			X	X					X		X
51-9082	X					X	X		X	X	X
51-9083			X	X	X			X	X	X	X
51-9121				X							
51-9122				X			X				
51-9123			X	X	X		X		X	X	X
51-9141	X		X		X	X	X	X	X	X	X
51-9151				X	X		X	X		X	X
51-9191	X		X		X					X	X
51-9192	X		X				X			X	X
51-9193	X		X	X	X		X	X		X	X
51-9194			X	X	X	X	X		X	X	
51-9195					X		X	X	X	X	
51-9196							X				
51-9197	X		X	X		X			X	X	
51-9198				X							
51-9199				X							
53-1011			X	X	X	X		X	X		X
53-2011	X			X	X	X	X	X	X		X
53-2012			X	X	X			X	X	X	X
53-2021	X				X		X	X			X
53-2022	X				X		X	X			X
53-2031					X	X		X			
53-3021			X	X			X		X	X	
53-3041					X		X				
53-3099			X	X		X	X	X			
53-4011	X		X		X				X	X	
53-4013	X		X	X	X		X		X	X	X
53-4021	X		X		X		X	X	X	X	
53-4031	X		X		X				X		X
53-4099	X		X		X				X		X
53-5011					X				X		
53-5021	X		X	X	X		X		X		
53-5022	X		X	X	X	X	X	X	X	X	X
53-5031					X			X		X	
53-6011	X		X		X	X		X	X	X	X



53-6021		X	X				X		X	X	X
53-6031			X								
53-6041	X				X					X	X
53-6051	X	X	X	X			X		X	X	X
53-6099		X	X	X			X		X	X	X
53-7011	X	X	X		X		X		X	X	
53-7021		X					X		X	X	
53-7031						X					
53-7032							X		X	X	
53-7033	X	X		X	X		X	X			
53-7041		X	X	X			X	X	X	X	X
53-7063								X			
53-7064		X									
53-7071		X	X	X	X						X
53-7072			X		X		X	X		X	
53-7073	X			X					X		X
53-7111	X		X					X			
53-7121	X			X	X		X	X	X		
53-7199		X	X	X			X	X	X	X	